values of the measurements made, but also its identifier) to the central computer that receives and processes the data. Sometimes, this data has already been preprocessed in the wheel unit itself. After processing, the central computer determines whether it is necessary to inform the driver of a defect and, in order to do so, uses the display devices **14** located on the instrument panel of the vehicle.

It should be noted (see. FIG. **2**) that the messages transmitted by the wheel units preferably consist of three frames having identical data. These frames are each transmitted for 10 ms. The time interval separating the first and second frames is ±60 ms+$\Delta\sigma$ ms. The time interval separating the second and third frames is ±80 ms+$\Delta\sigma$ ms. $\Delta\sigma$ is a value due to the imprecision of each clock. The value of σ is 0.25 ms (as will be explained later with regard to FIG. **3**). The entire message (with these three frames) is transmitted every minute when the vehicle is moving (for example with a speed greater than 25 km/h). It should also be noted that the entire message is transmitted during one revolution of the vehicle's wheel, so as to avoid transmission symmetry problems.

Each wheel unit consists in particular of a microcontroller whose internal clock consists, according to the present invention, of an RC oscillator (a conventional device comprising resistors and capacitors) and of an RF transmitter.

According to the present invention, it is preferred to use RC oscillators whose precision is about ±15%.

Thus, when the microcontroller of the wheel units detects that the vehicle is in running mode, it starts to transmit data, especially pressure data, every minute. Now, the microcontroller call-up and the transmission sequence are managed by means of the internal clock with a precision of about ±15%. This has the consequence of randomly time-shifting the transmissions of the first frames of a message, but also of the following two frames.

As FIG. **3** shows, the tolerance of the oscillator follows a Gaussian-type distribution law with a standard deviation of around 25 ms.

Thus, the transmission sequence of the various messages coming from the various wheels makes it possible to avoid (or minimize) the risk of a collision between the transmitted data, by randomly time-shifting each frame transmission from a wheel unit relative to the other wheel units.

The use of the substantial tolerance possessed by each internal microcontroller clock mounted in each wheel unit thus makes it possible to minimize the risk of simultaneously transmitting several information items, without the use of complex and/or expensive devices.

It should be noted that the natural time lag $\Delta\sigma$ also applies to the time interval of one minute (in running mode) and of one hour (in parking mode) between each data transmission.

Of course, the present invention is not limited to the method of implementation indicated above, rather it encompasses any variant lying within the competence of a person skilled in the art. Thus, the degree of precision may be different from ±15%, provided that this automatically introduces a time lag in the transmissions, thus avoiding any risk of a collision. Likewise, the operating mode of the vehicle (parking or running) may be determined by a speed of movement other than 25 km/h. In particular, the running mode may be detected as soon as the ignition has been turned on or the engine started, or even as soon as a request for gaining access to the inside of the vehicle is indicated.

What is claimed is:

1. A data transmission method for a tire-pressure monitoring system **(10)** of a vehicle, said data being transmitted by wheel units **(12)** to a central computer **(13)** located in the vehicle, said method comprising:

a data transmission phase in parking mode, over a first period; and

a data transmission phase in running mode, over a second period shorter than the first period; said method being characterized in that:

a natural time lag between various internal clocks with which each wheel unit **(12)** is equipped is used to prevent collisions between transmissions from the various wheel units of one and the same vehicle.

2. The method as claimed in claim **1**, characterized in that the internal time lag between the various clocks of each wheel unit is preferably determined by the precision of an RC-type oscillator mounted in each wheel unit.

3. The method as claimed in claim **2**, characterized in that RC oscillators having a precision of about ±15% are preferably used.

4. The method as claimed in claim **1**, characterized in that each wheel unit transmits several frames for each data item to be transmitted.

5. The method as claimed in claim **4**, characterized in that three frames are transmitted for each data item to be transmitted.

6. The method as claimed in claim **5**, characterized in that the time interval separating the first and second frames is around 60 ms+$\Delta\sigma$ ms and the time interval separating the second and third frames is around 80 ms+$\Delta\sigma$ ms.

7. The method as claimed in claim **4**, characterized in that the frames transmitting the same data item are transmitted during a single wheel revolution.

8. A tire-pressure monitoring system **(10)** of a vehicle, employing the method as claimed in claim **1**, said system being characterized in that it includes, for each wheel unit **(12)**, an internal clock produced by an RC type circuit whose precision is about ±15%.

9. The method as claimed in claim **2**, characterized in that each wheel unit transmits several frames for each data item to be transmitted.

10. The method as claimed in claim **3**, characterized in that each wheel unit transmits several frames for each data item to be transmitted.

11. The method as claimed in claim **5**, characterized in that the frames transmitting the same data item are transmitted during a single wheel revolution.

12. The method as claimed in claim **6**, characterized in that the frames transmitting the same data item are transmitted during a single wheel revolution.

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